

IN THE CLAIMS

1. (Currently Amended) A process for fabricating a semiconductor structure, comprising:

depositing a nitride layer on a semiconductor substrate with a first tool, wherein the nitride layer comprises silicon and nitrogen; and

depositing an anti-reflective layer on the semiconductor substrate with the first tool; and

depositing an oxide layer on the semiconductor substrate with a second tool, wherein the first tool and the second tool are the same;

wherein the depositing of the anti-reflective layer comprises reacting SiH_2Cl_2 , NH_3 , and N_2O .

2. (Original) The process of claim 1, wherein the depositing of the nitride layer occurs before the depositing of the anti-reflective layer.

3. (Original) The process of claim 1, wherein the depositing of the anti-reflective layer occurs before the depositing of the nitride layer.

4. (Original) The process of claim 1, wherein the depositing of the nitride layer comprises reacting SiH_2Cl_2 and NH_3 .

5. (Original) The process of claim 4, wherein the volumetric flow rate ratio for $\text{SiH}_2\text{Cl}_2:\text{NH}_3$ is from 0.3:1 to 5:1.

6. (Original) The process of claim 1, wherein the nitride layer comprises silicon deficient nitride.

7. (Original) The process of claim 1, wherein the nitride layer comprises silicon rich nitride.

8. (Original) The process of claim 1, wherein the nitride layer comprises a graded silicon nitride layer.

9. (Cancelled)

10. (Original) The process of claim 1, wherein the anti-reflective layer comprises silicon oxynitride.
11. (Cancelled)
12. (Currently amended) The process of claim 11 claim 1, wherein the depositing of the oxide layer comprises reacting SiH_2Cl_2 and N_2O .
13. (Original) The process of claim 1, wherein the first tool comprises a low-pressure chemical vapor deposition tool or a plasma-enhanced chemical vapor deposition tool.
14. (Currently amended) The A process for fabricating a semiconductor device, comprising:
 - forming a semiconductor structure by the process of claim 1; and
 - forming a semiconductor device from the semiconductor structure.
15. (Original) A process for making an electronic device comprising:
 - forming a semiconductor device by the process of claim 14; and
 - forming the electronic device comprising the semiconductor device.
- 16-23 (Cancelled)
24. (Currently amended) A process for fabricating a semiconductor structure, comprising:
 - depositing a nitride layer on a semiconductor substrate with a first tool, wherein the nitride layer comprises silicon and nitrogen; and
 - depositing an anti-reflective layer on the semiconductor substrate with the first tool; and
 - depositing an oxide layer on the semiconductor substrate with the first tool;
 - wherein the anti-reflective layer comprises silicon-rich nitride.
25. (Previously presented) The process of claim 24, wherein the depositing of the nitride layer comprises reacting SiH_2Cl_2 and NH_3 .

26. (Previously presented) The process of claim 25, wherein the volumetric flow rate ratio for $\text{SiH}_2\text{Cl}_2:\text{NH}_3$ is from 0.3:1 to 5:1.

27. (Previously presented) The process of claim 24, wherein the nitride layer comprises silicon deficient nitride.

28. (Currently amended) The process of claim 24, ~~further comprising depositing an oxide layer on the semiconductor substrate with the first tool, and~~ wherein the depositing of the oxide layer comprises reacting SiH_2Cl_2 and N_2O .

29. (Currently amended) ~~The A~~ process for fabricating a semiconductor device, comprising:

forming a semiconductor structure by the process of claim 24; and
forming a semiconductor device from the semiconductor structure.

30. (Previously presented) A process for making an electronic device comprising:

forming a semiconductor device by the process of claim 29; and
forming the electronic device comprising the semiconductor device.

31-32. (Cancelled)

33. (New) A process for fabricating a semiconductor structure, comprising:
depositing a nitride layer on a semiconductor substrate with a first tool,
wherein the nitride layer comprises silicon and nitrogen; and
depositing an anti-reflective layer on the semiconductor substrate with the first tool;
wherein the depositing of the anti-reflective layer comprises reacting SiH_2Cl_2 , NH_3 , and N_2O ,
the depositing of the nitride layer comprises reacting SiH_2Cl_2 and NH_3 , and
the volumetric flow rate ratio for $\text{SiH}_2\text{Cl}_2:\text{NH}_3$ is from 0.3:1 to 5:1.

34. (New) A process for fabricating a semiconductor structure, comprising:
depositing a nitride layer on a semiconductor substrate with a first tool,
wherein the nitride layer comprises silicon and nitrogen; and
depositing an anti-reflective layer on the semiconductor substrate with the
first tool;
wherein the depositing of the anti-reflective layer comprises reacting
 SiH_2Cl_2 , NH_3 , and N_2O , and
the nitride layer comprises silicon deficient nitride.

35. (New) The process of claim 34, wherein the depositing of the nitride layer
comprises reacting SiH_2Cl_2 and NH_3 , and the volumetric flow rate ratio for $\text{SiH}_2\text{Cl}_2:\text{NH}_3$
is from 0.3:1 to 5:1.

36. (New) The process of claim 34, further comprising depositing an oxide
layer on the semiconductor substrate with a second tool, wherein the first tool and the
second tool are the same.

37. (New) A process for making an electronic device, comprising:
forming a semiconductor structure by the process of claim 34;
forming a semiconductor device from the semiconductor structure; and
forming the electronic device comprising the semiconductor device.

38. (New) A process for fabricating a semiconductor structure, comprising:
depositing a nitride layer on a semiconductor substrate with a first tool,
wherein the nitride layer comprises silicon and nitrogen; and
depositing an anti-reflective layer on the semiconductor substrate with the
first tool;
wherein the depositing of the anti-reflective layer comprises reacting
 SiH_2Cl_2 , NH_3 , and N_2O , and
the nitride layer comprises silicon rich nitride.

39. (New) The process of claim 38, wherein the depositing of the nitride layer comprises reacting SiH_2Cl_2 and NH_3 , and the volumetric flow rate ratio for $\text{SiH}_2\text{Cl}_2:\text{NH}_3$ is from 0.3:1 to 5:1.

40. (New) The process of claim 38, further comprising depositing an oxide layer on the semiconductor substrate with a second tool, wherein the first tool and the second tool are the same.

41. (New) A process for making an electronic device, comprising:
forming a semiconductor structure by the process of claim 38;
forming a semiconductor device from the semiconductor structure; and
forming the electronic device comprising the semiconductor device.

42. (New) A process for fabricating a semiconductor structure, comprising:
depositing a nitride layer on a semiconductor substrate with a first tool,
wherein the nitride layer comprises silicon and nitrogen; and
depositing an anti-reflective layer on the semiconductor substrate with the
first tool;
wherein the depositing of the anti-reflective layer comprises reacting
 SiH_2Cl_2 , NH_3 , and N_2O , and
the nitride layer comprises a graded silicon nitride layer.

43. (New) The process of claim 42, wherein the depositing of the nitride layer comprises reacting SiH_2Cl_2 and NH_3 , and the volumetric flow rate ratio for $\text{SiH}_2\text{Cl}_2:\text{NH}_3$ is from 0.3:1 to 5:1.

44. (New) The process of claim 42, further comprising depositing an oxide layer on the semiconductor substrate with a second tool, wherein the first tool and the second tool are the same.

45. (New) A process for making an electronic device, comprising:
forming a semiconductor structure by the process of claim 42;
forming a semiconductor device from the semiconductor structure; and
forming the electronic device comprising the semiconductor device.

46. (New) A process for fabricating a semiconductor structure, comprising:
depositing a nitride layer on a semiconductor substrate with a first tool,
wherein the nitride layer comprises silicon and nitrogen; and
depositing an anti-reflective layer on the semiconductor substrate with the
first tool;
wherein the anti-reflective layer comprises silicon-rich nitride,
the depositing of the nitride layer comprises reacting SiH_2Cl_2 and NH_3 , and
the volumetric flow rate ratio for $\text{SiH}_2\text{Cl}_2:\text{NH}_3$ is from 0.3:1 to 5:1.

47. (New) A process for fabricating a semiconductor structure, comprising:
depositing a nitride layer on a semiconductor substrate with a first tool,
wherein the nitride layer comprises silicon and nitrogen; and
depositing an anti-reflective layer on the semiconductor substrate with the
first tool;
wherein the anti-reflective layer comprises silicon-rich nitride, and
the nitride layer comprises silicon deficient nitride.